Hazardous Materials Assessment at ADOT

Presented by:

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We look into the past . . .

We find hidden gems . . .

We apply our findings to projects

Table 2 – ISA DATA SUMMARY

Map Code [1]	Site Name/Former Name [2]	Address [3]	Site Operations — Key site use relative to hazmat issues [4]	Data Source [5]	Impact On Site L/M/H [6]	Impact Off Site L/M/H [7]
1	Circle K # 2705537	4900 W. Ina Road	CSS, LUST case closed	R,I,D & H	H	M
2	Pima County Auto Services (Texaco)	4901 W. Ina Road	CSS, LUST case closed	R,D	H	M
3	Circle K # 2700946	4500 W. Ina Road	CSS, LUST case closed	R,D & H	H	M
4	Quik Mart #4	4479 W. Ina Road	CSS, LUST case closed	R,I,D & H	H	M
5	Prosource Distribution Service	4640 W. Ina Road	Distribution facility with onsite fueling capabilities, release of approximately 30 gallons of diesel fuel from a tank.	D	H	M
6	Chevron Station #95482	4202 W. Ina Road	CSS	R,I,D & H	H	M
7	Giant (Conoco) #919	4180 W. Ina Road	CSS, LUST case closed	R,I,D & H	H	M
8	Superior Cleaners Laundromat	4140 W. Ina Road	Drycleaner, RCRA-SQG with no listed violations.	R,D & H	M	L
9	Firestone #26W9	3710 W. Ina Road	Automotive repair facility, known soil contamination > ADEQ action levels, UST removed in 1997.	R,I,D & H	H	M
10	Econo Lune N Tune	6621 N. Thornydale Road	Automotive repair facility with an UST.	D	H	M
11	Payless Cashways Inc. 139	6421 N. Thornydale Road	Retail facility. UST removed prior to 1988.	D	M	L
12	Johns Manville International Road	6455 N. Thornydale Road	Machine shop, RCRA-SQG with minor violations listed.	R,I,D & H	M	L
13	Costco	3901 W. Price Club Drive	CSS	R,I,D & H	H	M
14	Arco #5884	3825 West Orange Grove Road	CSS, reported release of approximately 50-100 gallons of gasoline.	R,I,D & H	H	M
15	Circle K #2701204	3700 West Orange Grove Road	CSS, LUST case closed	R,I,D & H	H	M

(1) Corresponds to location of site as indicated on Figure 2
(2) Current site name is used (prior site name in parentheses), CSS = current service station, FSS = former service station, HSS = historic service station (no longer present)
(3) Site Address
(4) Description of observed site operations / key site use relative to hazmat issues (LUST= Leaking Underground Storage Tank)
(5) Indicates primary information sources for listing: R=Reconnaissance, D=Database, I=Interview and H=Historical Documentation
(6) Risk of potential impact for an actionable release on-site, Low / Medium / High
(7) Risk of potential impact for an actionable release that have migrated off-site, Low / Medium / High

	Project Name	Figure Name
HDR	Initial Site Assessment Ina Road Design Concept Report Town of Marana, Arizona	Site Detail Map — Figure 2

Kelly W. Kading CPG CHMM

- Senior Professional Associate, Regional Hazmat Leader, National DOT/HazMat Program Manager
- BS Geology (Colorado State University)

  MBA (unfinished) (University of Colorado)
- 21 years in environmental consulting, 5 years in petroleum exploration
- FUN FACT: Went on his first tank pull at age 6, first geologic analysis at age 14 (documented roadside geology on a 500 mile road trip to central Mexico)

Ed Green, Senior Planner

- Senior Planner, EPG – Hazardous Materials Assessment group
- Lifelong resident of the valley
- 46 years at ADOT (!!!)
- FUN FACT: Ed was recently seen floating on his back in an inflatable boat, in a rushing canal, collecting concrete samples for asbestos analysis from a bridge. True story.

ADOT's hazmat history

- Pre-1988, What hazmat?
- 1988 "Gabrielli" property changed the view
- Early assessment methods
- Ed starts with hazmat -1992 – a full Phase I was the norm
- PISA came to be in 1994 as a limited-scope alternative (cost savings, pre-Phase I)
- Since AAI in 2006, more stringent process for Phase I / ISA efforts

Types of hazmat assessments

- PISA (Preliminary Initial Site Assessment)
- ISA (Initial Site Assessment) (Phase I)
- PSI (Preliminary Site Investigation) (Phase II)
- Asbestos assessment
- Lead Paint assessment
- Remediation services (Phase III)

PISA

- Some form of the PISA is included on almost every ADOT On-call Task Order
- Includes a regulatory file review, site visit and/or video log review, scope review
- Does NOT include historical research
- Variable scope, can be short turnaround
- It is MORE than the PISA form!!!

PISA, continued

- Site reconnaissance must be performed by an Environmental Professional (defined later)
- Records review may be performed by a vendor (such as EDR)
- Shelf life same as ISA, 180 days (after that, refer to ADOT EPG for guidance)

ISA (Phase I equivalent)

- Appropriate for projects in urbanized areas, when property acquisition is planned
- Guided by ASTM E 1527-05, (rigorous QC)
- This is the minimum hazmat analysis done on any non-ADOT project
- Scope of a PISA, PLUS interviews and historical source review (much more detail)
- Must be performed by an Environmental Professional (as defined by ASTM 1527-05 and USEPA)
- Shelf life 6 months, updates can be done from 6 months to one year, after that, redo.

PSI (Phase II equivalent)

- Intrusive sampling of soil and groundwater (drilling)
- Implementation of a customized laboratory analytical program
- Site-specific Health and Safety Plan
- Traffic Control Plans on public right-of-way projects (the majority of our work)
- Involves subcontractors, which requires fairly extensive up-front coordination

PSI, continued

- PSI level of effort is variable - can range from 50 to 500 hours
- Timeframe depends on schedules of drillers and site access limitations
- ADEQ regulations must be understood and referenced
- Rigorous QC process for reports

Asbestos Assessment

- Limited to load-bearing concrete components slated for demo or cutting / abrasion, OR building components (Ed or Angie will help you determine what qualifies for asbestos assessment on your project)
- Sampling MUST be conducted by staff with current AHERA asbestos training
- Recommended that sampling person also be current in OSHA 40-hour HAZWOPER
- “Assessment” is NOT “abatement”

Asbestos Assessment, cont.

- Assessments in Maricopa County are different than other counties – good for only one year
- NESHAP forms (mitigation measures recently released by EPG) apply only for contractors and district personnel – consultants / planners aren't required to fill out the form

Lead Paint Assessment

- New issue in 2007/2008 (Benson issue)
- Extensive stripe and bridge paint sampling performed in 2008
- Programmatic approach to lead paint sampling developed in late 2008, based on data collected during numerous studies
- Current mitigation measures were developed based on the wealth of data collected
- Program is now waste-stream-driven – only sample paint obliteration projects or combination projects (not mill and replace)

Remediation services (limited)

- For ADOT, typically limited to dig-and-haul projects related to petroleum releases, but sometimes more is needed
- Remediation efforts MUST be coordinated through ADOT's EPG Hazardous Materials Coordinators
- Remediation projects MUST be managed by qualified consultant staff

Why does ADOT follow ASTM and USEPA protocols?

- Brownfields Act of 2002, “All Appropriate Inquiry” (AAI)
- Resulting requirements adopted by USEPA
- NEPA forces compliance with Federal laws
- As of November 2006, hazmat assessment, *even for NEPA documents*, requires compliance with AAI
- Finally, USEPA weighs in on who is qualified to do this analysis, and it is an “Environmental Professional”

Environmental Professional (EP)

New AAI requirements define an EP.

- *Definition*: A person who possesses sufficient *specific* education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases on, at, in or to a property.

Three ways to meet the EP definition -

1. Licensed, registered, or certified by a state or federal entity as a PE or PG **PLUS** three years relevant experience
2. Holds a BS degree in a physical science or engineering discipline **PLUS** five years relevant experience
3. **TEN** years relevant experience

Project Examples

- PISA – US 60 - Miami Sidewalks
- ISA – SR 85 - Ajo
- PSI – SR 89 – Chino Valley
- PSI plus – SR 179 - Sedona “Y”
- Asbestos – SR 95 - Bill Williams Bridge fire damage and sampling
- Lead paint – US 191 - Guthrie Bridge

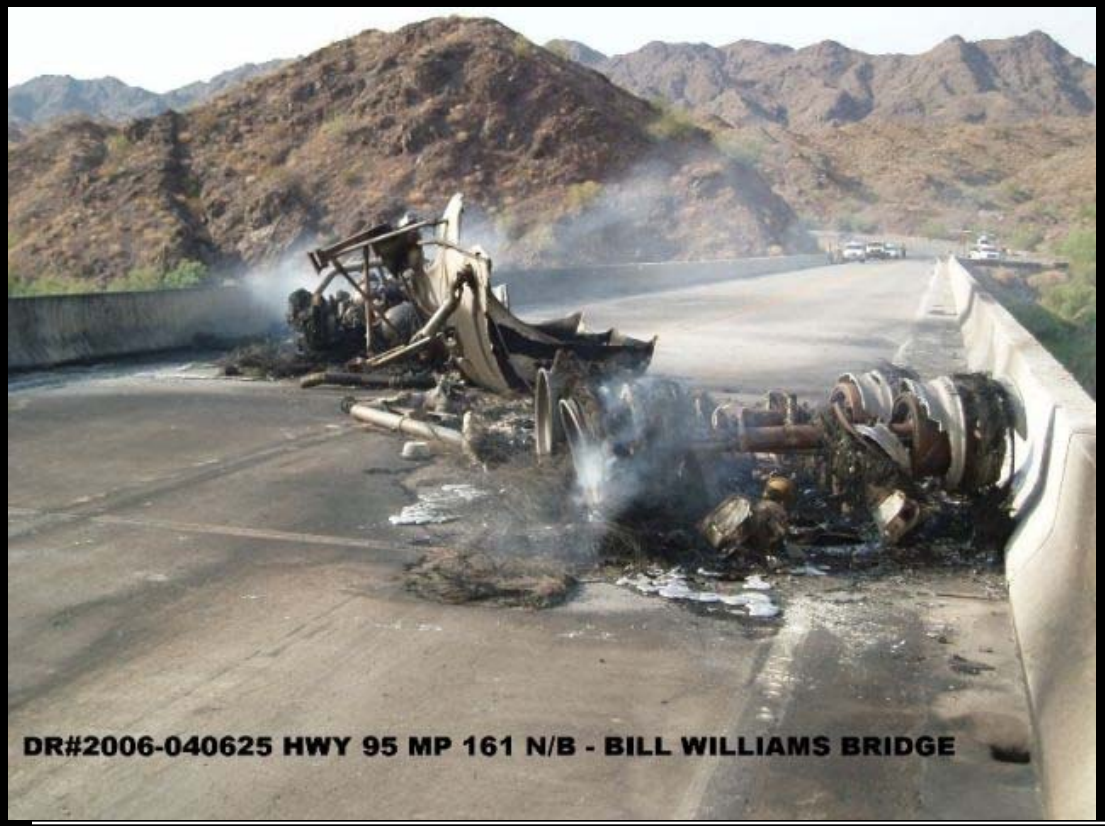
Miami Sidewalk PISA – straight to PSI

SR 85 Ajo – historic gas stations

SR 89 – Chino Valley PSI

SR 179 - Sedona “Y” PSI +

SR 95 – Bill Williams Bridge fire damage and sampling



US 191 – Guthrie Bridge lead paint abatement plan

ANY QUESTIONS?

- THANK YOU !!!!!